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ABSTRACT

This study compared preverbal children (ages 3-4) with severe language impairments who were difficult to engage (Group 1) with others who were readily engaged (Group 2). The study focused on transitional episodes of engagement and on frequency of clinician and child verbal communications and nonverbal acts within transitional episodes. Eight clinician-child pairs were studied. Group 1 children spent more time maintained at a low level of engagement, while Group 2 children spent more time maintained at a high level of engagement. Group 1 was less likely than Group 2 to move from a "rising episode" (i.e., rising from low to high levels of engagement) to "maintained at a high level of engagement." Within transitional episodes, when Group 2's clinicians produced two more acts than the children, the engagement level fell. When the number of acts produced by the clinician and child matched almost exactly, the engagement level rose. Group 1's clinicians did not modulate the number of their verbal and nonverbal acts as a function of engagement level within rising and falling episodes. (JDD)

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Engagement During Communicative Interactions with Two Groups of Preverbal Children

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Two Groups of Preverbal Children

ABSTRACT

Some preschool-age children with severe language impairments are difficult to engage in interactions; others are more readily engaged. Episodes of high, low, and changing levels of engagement in child-clinician interactions were identified. Child and clinician social-communicative behaviors within episode types for each group of children were examined. The results have implications for defining clinician strategies effective in maintaining and enhancing engagement level for children in each group.

INTRODUCTION

Adult-child social interactions characterized by mutual engagement provide the context for communicative exchanges and the optimal frame for the acquisition of language (Bruner, 1978; Messer, 1983). Mutual engagement implies a common topic, joint attention, and active and reciprocal participation toward mutual goals.

We previously described preverbal children having severe language impairments who are difficult to engage and others who are readily engaged (Weintraub & Stillman, 1990). These two groups of children behave differently at varying levels of engagement. Presumably, because the children differ, clinician strategies should also differ. Clinician strategies used when children are only partially engaged may effect change in the children's ultimate engagement level. The present study examined the two groups in terms of transitional episodes of engagement. The frequency of clinician and child verbal communications and nonverbal acts within transitional episodes were also examined.

METHODS

Eight clinician-child pairs were studied. Children ranged in age from three to four years and were nonverbal or had MLU's of 1.0 morpheme. They were divided into two groups based on the following criteria:

GROUP 1	GROUP 2
1. Actions and verbalizations often not directed to others	1. Actions and verbalizations directed to others
2. Often unresponsive to directives	2. Responsive to directives
3. Inappropriate display of affect	3. Appropriate display of affect
4. Idiosyncratic use of objects	4. Conventional use of objects
5. Stereotyped or "self-stimulatory" behaviors	5. Stereotyped or "self-stimulatory" behaviors rare

Three, five-minute videotape segments for each clinician-child pair were coded. Videotapes were divided into 10-second intervals. In each interval, the child was rated Fully Engaged, Partially Engaged, or Not Engaged using the following criteria:

1. **Fully Engaged**- Actively participating and contributing to the interaction

2. **Partially Engaged**- Brief or partial involvement in the interaction

3. **Not Engaged**- Not contributing to the interaction

Episodes comprised of three or more sequential intervals of engagement ratings were determined. Intervals were grouped into one of five types of engagement episodes:

1. **Maintained** at a **high** level of engagement
2. **Maintained** at a **mid** level
3. **Maintained** at a **low** level
4. **Rising** from low to high levels of engagement
5. **Falling** from high to low levels of engagement

Intervals simulated the essential moment-by-moment monitoring by clinicians of the children's engagement level. Grouping intervals into episodes provided a functional unit of interaction unconstrained by arbitrary time boundaries. The sequence of episodes indicates the overall course or flow of the interaction.

Each interval within Rising and Falling Episodes was then examined for the frequency of child and clinician verbal communications and nonverbal acts using the following criteria:

Verbal Communications- Number of verbal utterances

Nonverbal Acts- Number of child nonverbal actions to which the clinician could respond or number of clinician nonverbal actions directed to the child; (includes nonverbal communications)

RESULTS

Figure 1 shows the frequency of each of the five episode types for both groups of children. There were nine more Type 1 Episodes for Group 2 than for Group 1. There were 10 more Type 3 Episodes for Group 1 than for Group 2. Episode Types 4 and 5 occurred slightly more often in Group 1. Overall, there were eight more episodes for Group 1 than for Group 2.

Figure 1

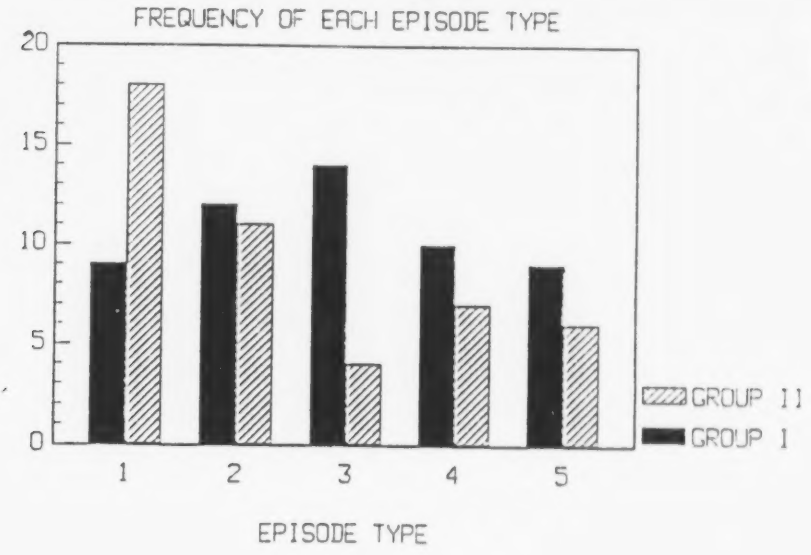
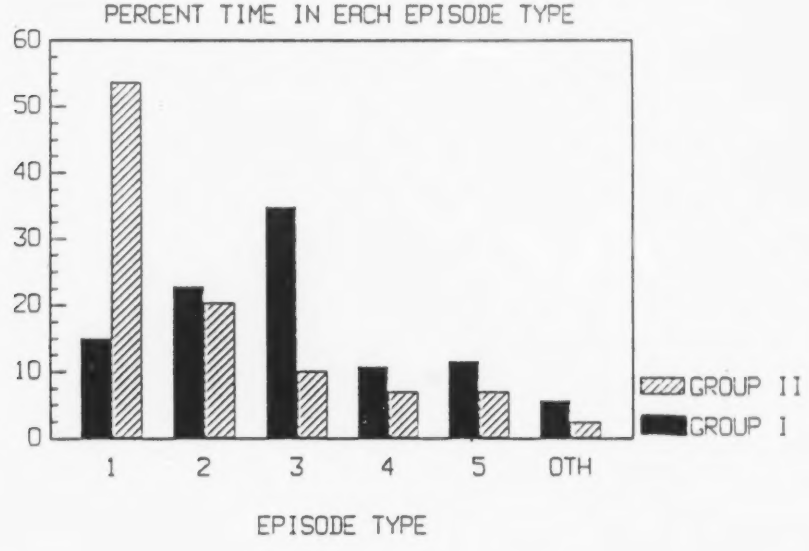


Figure 2 shows the distribution of time spent in each episode type for the two groups of children. Group 2 spent over 38% more time in Episode Type 1. Group 1 spent over 24% more time in Episode 3 than did Group 2. Group 1 also spent slightly more time in Episode Types 2, 4, and 5.

Figure 2



A transitional probability matrix was constructed to examine the likelihood of each episode type being followed by itself and by each of the other types. Episode Type 1 was more likely to be followed by Episode Type 2 in Group 1 (.67) than in Group 2 (.55). Episode Type 2 was more likely to be followed by Episode Type 1 in Group 2 (.78) than in Group 1 (.36). Episode Type 2 was more likely to be followed by Episode Type 3 in Group 1 (.45) than in Group 2 (.22). Finally, Episode Type 4 was more likely to be followed by Episode Type 1 in Group 2 (.60) than in Group 1 (.22).

Figures 3 & 4 profile the mean number of clinician and child verbal and nonverbal acts preceding and during Episode Type 4 for both groups. The means are for the three intervals preceding the Episode, the first and the last interval of the Episode, and the intervals in the middle of the Episode. In the intervals preceding and within Episode Type 4, Group 1's clinicians produced almost four more verbal and nonverbal acts per interval than the children. Group 2's clinicians more closely paralleled the acts of the children, yielding an overall lower frequency. Group 1 children gradually increased the number of their acts across Episode Type 4, but their clinicians did not. They produced the same number of acts regardless of the changing status of engagement or of the children's number of acts. The number of acts produced by Group 2's clinicians more closely approximated the number produced by the children.

Figure 3

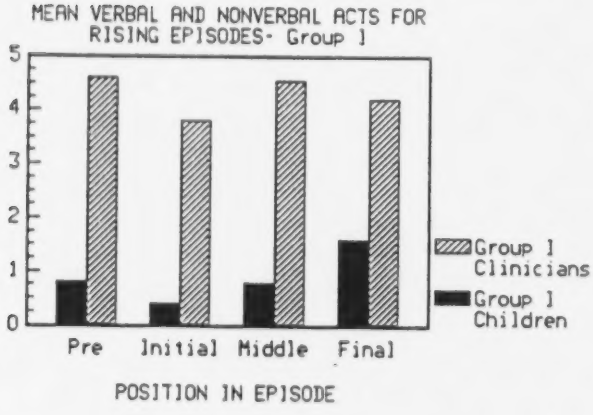
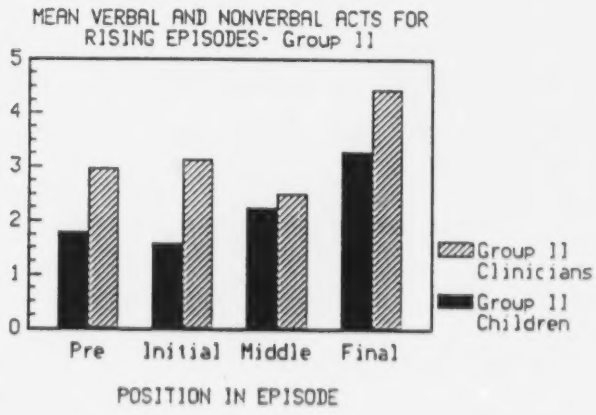


Figure 4



Figures 5 & 6 profile the mean number of clinician and child verbal and nonverbal acts preceding and during Episode Type 5 for both groups. In the intervals preceding the Episode, Group 1 children produced fewer acts than Group 2 children. However, Group 1's clinicans produced more acts than Group 2's clinicians. Within the Episode, Group 1 and Group 2 children produced almost the same number of acts per interval, but Group 1's clinicians produced almost one more act per interval than Group 2's clinicians. Across Episode Type 5, the Group 1 children's number of acts gradually

decreased, but their clinicians' acts did not decrease until the last interval of the Episode. The number of acts produced by the Group 2 children across Episode Type 5 stayed about the same, but the number of acts produced by their clinicians gradually decreased until it approximately matched the children's.

Figure 5

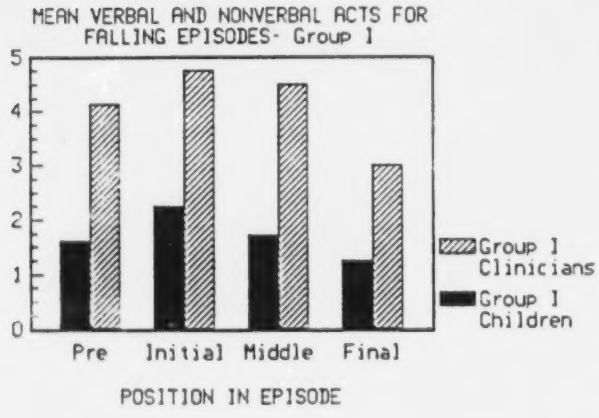
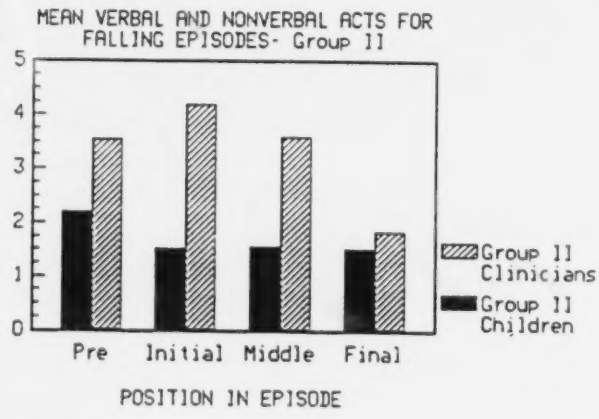


Figure 6



SUMMARY

1. Examining clinician-child interactions in terms of episodes of engagement provides a picture of the overall flow of the interaction.

2. Interactions with Group 1 and Group 2 children were composed of different types of episodes. Group 1 children spent more time Maintained at a low level of engagement. Group 2 children spent more time Maintained at a high level of engagement. The total number of episodes observed was greater for Group 1 than Group 2.

3. Group 1 was more likely to move from Maintained at a high level of engagement to Maintained at a mid level of engagement and from Maintained at a mid level of engagement to Maintained at a low level of engagement. Group 1 was less likely than Group 2 to move from a Rising Episode to Maintained at a high level of engagement. Therefore, defining clinician strategies is particularly important in interactions with difficult to engage children.

4. Interactions include transitional episodes which should be monitored by clinicians so that they may optimally facilitate full engagement.

5. Preceding and within Rising and Falling Episodes, Group 1's clinicians produced more verbal communications with children who are less able to understand them. Group 1 children also produced fewer verbal and nonverbal acts than did Group 2 children.

6. Group 1's clinicians did not modulate the number of their verbal and nonverbal acts as a function of engagement level within Rising and Falling Episodes.

7. Group 1's clinicians did not decrease the number of their verbal and nonverbal acts until the last interval of Falling Episodes. At that point, the child was already Not Engaged.

8. Group 2's clinicians appeared more adept at modulating their own productions to more closely parallel the children's rate of production.

9. Within transitional episodes, when Group 2's clinicians produced two more acts than the children, the engagement level fell. When the number of acts produced by the clinician and child matched almost exactly, the engagement level rose.

10. Group 1's clinicians appeared less able to modulate the number of verbal and nonverbal acts they produced in relation to the number of child acts or to engagement level. They produced more acts than Group 2's clinicians in interactions with children who understand and produce less. Group 1 children also spent more time Not Engaged.

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